



HOBBS OCD

AUG 05 2011

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EnerVest Operating, LLC

H2S Contingency Plan

Field / Location: Loco Hills / Sand Dunes

Well / Facility ID: Sharbro Federal Well #10

County: Lea

State: New Mexico

Surface Location

**Section 7
Township 23 S
Range 32 E**

**FSL: 1830'
FEL: 1980'**

EXHIBIT 11

AUG 08 2011

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H2S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H₂S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Install H₂S equipment prior to drilling out under surface pipe.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 1000' before drilling into the first sour zone.

Emergency Response Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 1000' before drilling into the first sour zone.

Emergency call lists: Included are the telephone numbers of all persons that would need to be contacted, should an H₂S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

Check Lists: Status check lists and procedural check lists have been included to ensure adherence to the plan.

General Information: A general information section has been included to supply support information.

EMERGENCY PROCEDURES SECTION

- I. In the event of any evidence of H₂S level above 10 ppm, take the following steps immediately:
 - A. Secure breathing apparatus.
 - B. Order non-essential personnel out of the danger zone.
 - C. Take steps to determine if the H₂S level can be corrected or suppressed, and if so, proceed with normal operations.
- II. If uncontrollable conditions occur, proceed with the following:
 - A. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the State Oil & Gas Division and/or the DOI - Bureau of Land Management of the situation based on one or both agency with jurisdiction.
 - B. Remove all personnel to the Safe Briefing Area.
 - C. Notify public safety personnel (State Police / County Sheriff) for help with maintaining road blocks and implementing evacuation.
 - D. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.
- III. Responsibility:
 - A. The Company Supervisor shall be responsible for the total implementation of the plan.
 - B. The Company Supervisor shall be in complete command during any emergency.
 - C. The Company Supervisor shall designate a back up Supervisor in the event that he/she is not available.

EMERGENCY PROCEDURE IMPLEMENTATION

I. Drilling or Tripping

A. All Personnel

1. When alarm sounds, put on assigned PPE escape equipment and report to upwind Safe Briefing Area.
2. Check status of other personnel (buddy system).
3. Secure breathing apparatus.
4. Wait for orders from supervisor.

B. Drilling Foreman

1. Report to the upwind Safe Briefing Area.
2. Put on assigned PPE breathing apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
3. Using a gas detector determine the concentration of H₂S.
4. Assess the situation and take appropriate control measures.

C. Tool Pusher

1. Report to the upwind Safe Briefing Area.
2. Put on assigned PPE breathing apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).
3. Verify the determination of the concentration of H₂S indicated by the meter.
4. Assess the situation and take appropriate control measures.

D. Driller

1. Check the status of rig and service personnel (in a rescue attempt, always use the buddy system).
2. Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.
3. Assume the responsibility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

E. Derrick Man and Floor Hands

1. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

F. Mud Engineer

1. Report to the upwind Safe Briefing Area.
2. When instructed, wear H₂S PPE and check mud for pH level and H₂S level.

G. Safety Personnel

1. Don Breathing Apparatus.
2. Check status of all personnel.
3. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick

- A. All personnel report to the upwind Safe Briefing Area.
- B. Follow standard BOP procedures.

III. Open Hole Logging

- A. All unnecessary personnel should leave the rig floor.
- B. Drilling Foreman and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

- A. Follow "Drilling or Tripping" procedures.
- B. Assure that all personnel have access to protective equipment.

SIMULATED BLOWOUT CONTROL DRILLS

All drills will be initiated by activating alarm devices (air horn). One long blast, on the air horn, for ACTUAL and SIMULATED Blowout Control Drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill # 1	Bottom Drilling
Drill # 2	Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire pit drill assignment. The times must be recorded on the IADC Driller's Log as "Blowout Control Drill".

Drill No.:			
Reaction Time to Shut-In:	minutes,		seconds.
Total Time to Complete Assignment:	minutes,		seconds.

I. Drill Overviews

A. Drill No. 1- Bottom Drilling

1. Sound the alarm immediately.
2. Stop the rotary and hoist kelly joint above the rotary table.
3. Stop the circulatory pump.
4. Close the drill pipe rams.
5. Record casing and drill pipe shut-in pressures and pit volume increases.

B. Drill No. 2 – Tripping Drill Pipe

1. Sound the alarm immediately.
2. Position the upper tool joint just above the rotary table and set the slips.
3. Install a full opening valve or inside blowout preventor tool in order to close the drill pipe.
4. Close the drill pipe rams.
5. Record the shut-in annular pressure.

II. Crew Assignments

A. Drill No. 1 – Bottom Drilling

1. Driller

- a) Stop the rotary and hoist kelly joint above the rotary table.
- b) Stop the circulatory pump.
- c) Check flow.
- d) If flowing, sound the alarm immediately.
- e) Record the shut-in drill pipe pressure.
- f) Determine the mud weight increase needed or other courses of action.

2. Derrickman

- a) Open choke line valve at BOP.
- b) Signal Floor Man # 1 at accumulator that choke line is open.
- c) Close choke and upstream valve after pipe tams have been closed.
- d) Read the shut-in annular pressure and report readings to Driller.

3. Floor Man # 1

- a) Close the pipe rams after receiving the signal from the Derrickman.
- b) Report to Driller for further instructions.

4. Floor Man # 2

- a) Notify the Tool Pusher and Operator Representative of the H₂S alarms.
- b) Check for open fires and, if safe to do so, extinguish them.
- c) Stop all welding operations.
- d) Turn-off all non-explosion proof lights and instruments.
- e) Report to Driller for further instructions.

5. Tool Pusher

- a) Report to the rig floor.
- b) Have a meeting with all crews.
- c) Compile and summarize all information.
- d) Calculate the proper kill weight.
- e) Ensure that proper well procedures are put into action.

6. Operator Representative

- a) Notify the Drilling Superintendent.
- b) Determine if an emergency exists and if so, activate the contingency plan.

B. Drill No. 2 – Tripping Pipe

1. Driller

- a) Sound the alarm immediately when mud volume increase has been detected.
- b) Position the upper tool joint just above the rotary table and set slips.
- c) Install a full opening valve or inside blowout preventor tool to close the drill pipe.
- d) Check flow.
- e) Record all data reported by the crew.
- f) Determine the course of action.

2. Derrickman

- a) Come down out of derrick.
- b) Notify Tool Pusher and Operator Representative.
- c) Check for open fires and, if safe to do so, extinguish them.
- d) Stop all welding operations.
- e) Report to Driller for further instructions.

3. Floor Man # 1

- a) Pick up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 2).
- b) Tighten valve with back-up tongs.
- c) Close pipe rams after signal from Floor Man # 2.
- d) Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.
- e) Report to Driller for further instructions.

4. Floor Man # 2

- a) Pick-up full opening valve or inside blowout preventor tool and stab into tool joint above rotary table (with Floor Man # 1).
- b) Position back-up tongs on drill pipe.
- c) Open choke line valve at BOP.
- d) Signal Floor Man # 1 at accumulator that choke line is open.
- e) Close choke and upstream valve after pipe rams have been closed.
- f) Check for leaks on BOP stack and choke manifold.
- g) Read annular pressure.
- h) Report readings to the Driller.

5. Tool Pusher

- a) Report to the rig floor.
- b) Have a meeting with all of the crews.
- c) Compile and summarize all information.
- d) See that proper well kill procedures are put into action.

6. Operator Representative

- a) Notify Drilling Superintendent
- b) Determine if an emergency exists, and if so, activate the contingency plan

IGNITION PROCEDURES

Responsibility:

The decision to ignite the well is the responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. In the event the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.
2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.
3. Ignite from upwind and do not approach any closer than is warranted.
4. Select the ignition site best suited for protection and which offers an easy escape route.
5. Before igniting, check for the presence of combustible gases.
6. After igniting, continue emergency actions and procedures as before.
7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

NOTE: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide, which is also highly toxic. Do not assume the area is safe after the well is ignited.

TRAINING PROGRAM

When working in an area where Hydrogen Sulfide (H_2S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel at the well site have had adequate training in the following:

1. Hazards and Characteristics of Hydrogen Sulfide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H_2S detection, emergency alarm and sensor location.
5. Emergency rescue.
6. Resuscitators.
7. First aid and artificial resuscitation.
8. The effects of Hydrogen Sulfide on metals.
9. Location safety.

Service company personnel and visiting personnel must be notified if the zone contains H_2S , and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

EMERGENCY EQUIPMENT REQUIREMENTS

Lease Entrance Sign:

Should be located at the lease entrance with the following information:

CAUTION-POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the safe briefing areas and should include the following:
- Two SCBA's at each briefing area.
- Enough air line units to operate safely, anytime the H₂S concentration reaches the IDLH level (100 PPM).
- Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrick man and the other operation areas.

Windsocks or Wind Streamers:

- A minimum of two 10" windsocks located at two different heights in strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location).

Hydrogen Sulfide Detector and Alarms:

- 1-Four channel H₂S monitor with alarms.
- Four (4) sensors located as follows: # 1 – Rig Floor, # 2 – Bell Nipple, # 3 – Shale Shaker, # 4 – Mud Pits.
- Gastec or Draeger pump with tubes.
- Sensor test gas.

Well Condition Sign and Flags:

The Well Condition Sign w/flags should be placed a minimum of 150' before you enter the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H₂S Gas Present

Auxiliary Rescue Equipment:

- Stretcher
- 2 – 100' Rescue lines
- First Aid Kit properly stocked.

Mud Inspection Equipment:

Garret Gas Train or Hach Tester for inspection of Hydrogen Sulfide in the drilling mud system.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Blowout Preventor:

- The well shall have hydraulic BOP equipment for the anticipated BHP.
- The BOP should be tested upon installation.
- BOP, Choke Line and Kill Line will be tested as specified by Operator.

Confined Space Monitor:

There should be a portable multi-gas monitor with at least 3 sensors (O₂, LEL & H₂S). This instrument should be used to test the atmosphere of any confined space before entering. It should also be used for atmospheric testing for LEL gas before beginning any type of Hot Work. Proper calibration documentation will need to be maintained for calibration time limits.

Communication Equipment:

- Proper communication equipment such as cell phones or 2 – way radios should be available at the rig.
- Radio communication shall be available for communication between the company man's trailer, rig floor and the tool pusher's trailer.
- Communication equipment shall be available on the vehicles.

Special Control Equipment:

- Hydraulic BOP equipment with remote control on the ground.
- Rotating head at the surface casing point.

Evacuation Plan:

- Evacuation routes shall be established prior to spudding the well.
- Routes shall be discussed with all rig personnel.

Designated Areas:***Parking and Visitor area:***

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- Designate a smoking area in a safe location.

Safe Briefing Areas:

- Two Safe Briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds or they are at a 180 degree angle if wind directions tend to shift in the area.
- Personal protective equipment should be stored at both briefing areas or if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.
- Automatic Flare Igniters are recommended for installation on the rig.

CHECK LISTS

Status Check List

Note: Date each item as they are implemented.

1. Sign at location entrance.
2. Two (2) wind socks (in required locations).
3. Wind Streamers (if required).
4. SCBA's on location for all rig personnel and mud loggers.
5. Air packs, inspected and ready for use.
6. Spare bottles for each air pack (if required).
7. Cascade system for refilling air bottles.
8. Cascade system and hose line hook up.
9. Choke manifold hooked-up and tested. (Before drilling out surface casing.)
10. Remote Hydraulic BOP control (hooked-up and tested before drilling out surface casing).
11. BOP tested (before drilling out surface casing).
12. Mud engineer on location with equipment to test mud for H₂S.
13. Safe Briefing Areas set-up.
14. Well Condition sign and flags on location and ready.
15. Hydrogen Sulfide detection system hooked-up & tested.
16. Hydrogen Sulfide alarm system hooked-up & tested.
17. Stretcher on location at Safe Briefing Area.
18. 2-100' Life Lines on location.
19. 1-20# Fire Extinguisher in safety trailer.
20. Confined Space Monitor on location and tested.

21. All rig crews and supervisor trained (as required).
22. Access restricted for unauthorized personnel.
23. Drills on H₂S and well control procedures.
24. All outside service contractors advised of potential H₂S on the well.
25. NO SMOKING sign posted.
26. H₂S Detector Pump w/tubes on location.
27. 25mm Flare Gun on location w/flares.
28. Automatic Flare Ignitor installed on rig.

Procedural Check List

Perform the following on each tour:

1. Check fire extinguishers to see that they have the proper charge.
2. Check Breathing equipment to insure that they have not been tampered with.
3. Check pressure on the supply air bottles to make sure they are capable of recharging.
4. Make sure all of the Hydrogen Sulfide detection systems are operative.

Perform the following each week:

1. Check each piece of breathing equipment to make sure that they are fully charged and operational. This requires that the air cylinder be opened and the mask assembly be put on and tested to make sure that the regulators and masks are properly working. Negative and Positive pressure should be conducted on all masks.
2. BOP skills.
3. Check supply pressure on BOP accumulator stand-by source.
4. Check all breathing air mask assemblies to see that straps are loosened and turned back, ready to use.
5. Check pressure on cascade air cylinders to make sure they are fully charged and ready to use for refill purposes if necessary.
6. Check all cascade system regulators to make sure they work properly.
7. Perform breathing drills with on-site personnel.
8. Check the following supplies for availability:
 - Stretcher
 - Safety Belts and ropes.
 - Spare air bottles.
 - Spare oxygen bottles (if resuscitator required).
 - Gas Detector Pump and tubes.
 - Emergency telephone lists.
9. Test the Confined Space Monitor to verify the batteries are good.

BRIEFING PROCEDURES

The following scheduled briefings will be held to ensure the effective drilling and operation of this project:

Pre-Spud Meeting

Date: Prior to spudding the well.

Attendance: Drilling Supervisor
Drilling Engineer
Drilling Foreman
Rig Tool Pushers
Rig Drillers
Mud Engineer
All Safety Personnel
Key Service Company Personnel

Purpose: Review and discuss the well program, step-by-step, to insure complete understanding of assignments and responsibilities.

EVACUATION PLAN

General Plan

1. When the company approved supervisor (Drilling Foremen, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the Area Map.
2. Company assigned safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists and evacuation need to be implemented.
3. Company safety personnel that have been trained in the use of the proper emergency equipment will be utilized.
4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, Company assigned safety personnel will determine when the area is safe for re-entry.

AFFECTED PUBLIC NOTIFICATION

Notification must be issued to the affected public within the radius of exposure (ROE) @100 ppm in compliance with the following guidelines within a radius of _____ when the ROE is known.

Known ROE for this operation is: UNKNOWN

If the ROE is unknown it will be considered to be 100 ppm (minimum notification limit rule) and notification must be issued in compliance with the following guidelines to the affected public within a minimum radius of 3,000 feet.

Notification Guidelines

The geologic zones that will be encountered during drilling are known/unknown to contain hazardous quantities of H₂S. The map included in this location document illustrates the affected areas of the community. The affected public within the designated radius (see above) will be notified by hand delivered written notice describing the activities, potential hazards, conditions of evacuation, evacuation drill siren alarms and other precautionary measures.

Potential Evacuee Description:

List of Names and Number of Residents Notified:

Notification Process Description:

A continuous siren audible to all residence will be activated, signaling evacuation of previously notified and informed residents.

Evacuation Plan:

All evacuees will evacuate lateral to the right or left of the wind direction.

The Company will identify all home bound or highly susceptible individuals and make special evacuation preparations, interfacing with the local law enforcement and emergency medical services as necessary.

Emergency Assistance Telephone List

PUBLIC SAFETY:

911 or

County Sheriff Contact	(575) 396 2811 / (575) 395 2121
Local Fire Department	(575) 395 2221
County Fire Department	(575) 397 9308
Local Police Department	(575) 395 2501
Local Emergency Planning Committee	(505) 393 2870
Local Hospital	Hobbs (575) 492 5000 / Lovington (575) 396 6611
Regional Hospital	See Local Hospitals
Life Flight Services	Notify Hospitals Above
State Police	(575) 392 5580
State DOT	(505) 637 7201
Bureau of Land Management	(575) 887 6544
State Poison Center	1-800-222-1222
State Oil & Gas Agency	(575) 393 6161
State Oil & Gas Agency 24 Hour Number	(575) 370 3186

EnerVest Emergency Notification List

EnerVest (Main No.)	(713) 659 3500
Drilling Manager	(713) 495 1502
Drilling Engineer	(713) 495 1561
Regulatory	(713) 495 6530
Health, Safety & Environmental	(713) 495 6534
Operations Manager	(713) 495 6592
Area Production Foreman (Cellular Phone)	(575) 631 7790
Area Production Superintendent (Cellualr Phone)	(325) 338 9768
Field Office	(575) 677 2200

Drilling / Work Over Contractor(s)

Local Safety Equipment Vendors

GENERAL INFORMATION

Toxic Effects of H₂S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic than Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table 1. Toxicity table for H₂S and physical effects are shown in Table II.

Table 1
Permissible Exposure Limits of Various Gasses

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H ₂ S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO ₂	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	0.97	25 ppm	200 ppm	
Carbon Dioxide	CO ₂	1.52	5000 ppm	30,000 ppm	
Methane	CH ₄	0.55	4.7% LEL	14% UEL	

Definitions

- A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.
- B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H₂S is 19 PPM.
- C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H₂S is 100 PPM.
- D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

TABLE II
Toxicity Table of H₂S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure
.0015	15	STEL for 15 minutes of exposure
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes.
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H₂S

The properties of all gasses are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT

Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence. a fact that makes the gas extremely dangerous to be around.

ODOR – ROTTEN EGGS

Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs". For this reason it earned its common name "sour gas". However, H₂S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192

Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H₂S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%

Mixed with the right proportion of air or oxygen, H₂S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO₂), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H₂S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H₂S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

RESPIRATOR USE

The Occupational Safety and Health Administration (OSHA) regulates the use of respiratory protection to protect the health of employees. OSHA's requirements are written in the Code of Federal Regulations, Title 29, Part 1910, Section 134, Respiratory Protection. This regulation requires that all employees who might be required to wear respirators **shall complete an OSHA mandated medical evaluation questionnaire.** The employee then should be fit tested prior to wearing any respirator while being exposed to hazardous gasses. **The respirator use documentation as required by OSHA for respirator use shall be available to the Company Supervisor by the rig company and verified within OSHA stipulated testing time limits shall be verified or the Company will insure testing and documentation is performed prior to employees working in a potential H₂S atmosphere.**

Written procedures shall be prepared covering safe use of respirators in dangerous atmospheric situations, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators.

Respirators shall be inspected prior to and after each use to make sure that the respirator has been properly cleaned, disinfected and that the respirator works properly. The unit should be fully charged prior to being used.

Anyone who may use respirators shall be properly trained in how to properly seal the face piece. They shall wear respirators in normal air and then in a test atmosphere. (Note: Such items as facial hair (beard or sideburns) and eyeglass temple pieces will not allow a proper seal.) Anyone that may be expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Wearing of contact lenses shall not be allowed due to the potential for H₂S eye intrusion.

Respirators shall be worn during the following conditions:

- A. Any employee who works near the top or on the top of any tank unless tests reveal less than 20 ppm of H₂S.
- B. When breaking out any line where H₂S can reasonably be expected.

- C. When sampling air in areas where H₂S may be present.
- D. When working in areas where the concentration of H₂S exceeds the Threshold Limit Value for H₂S (10 ppm).
- E. At any time where there is a doubt as to the H₂S level in the area to be entered.

EMERGENCY RESCUE PROCEDURES

DO NOT PANIC!!!

Remain Calm - THINK

1. Before attempting any rescue you must first get out of the hazardous area yourself. Go to a safe briefing area.
2. Sound an alarm and activate the 911 system.
3. Put on breathing apparatus. At least two persons should do this, when available use the buddy system.
4. Rescue the victim and return them to a safe briefing area.
5. Perform an initial assessment and begin proper First Aid/CPR procedures.
6. Keep the victim lying down with a blanket, coat or any material that will elevate the shoulders higher than the head to keep airway open. Conserve body heat and do not leave unattended.
7. If the eyes are affected by H₂S, wash them thoroughly with potable water. For slight irritation, cold compresses are helpful.
8. In case a person has only minor exposure and does not lose consciousness totally, it's best if he doesn't return to work until the following day.
9. Any personnel overcome by H₂S should always be examined by medical personnel. They should always be transported to a hospital or doctor.

PROJECT 114-6400818
DATE 04-29-2011
FILE . H \GIS\114-6400818





SURFACE USE PLAN OF OPERATIONS

1. Existing Access Roads

- A. The well site survey and elevation plat for the proposed well is shown in Exhibit 4. It was staked by John West Surveying Company, Hobbs, NM.
- B. All existing roads to the location are shown in the topographic map (Exhibit 2) and Plan of Development plat (Exhibit 6). The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary.
- C. Directions to Location:

From the intersection of State Highway 128 and County Road 789 (Red Road), go north on Red Road approximately 5.0 miles. Turn right and go east approximately 1.9 miles. Turn right and go south approximately 0.6 mile to a proposed road survey. Follow road 923 feet to the location.

- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Proposed Access Road:

The elevation plat (Exhibit 4) shows that 923' of new road will be required for this location, to be constructed from a point on the existing lease road, as shown on Exhibits 2 and 6. Any new road that is required will be constructed as follows:

- A. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.
- D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM approved caliche pit or from a private source.



3. Locations of Existing Wells:

Exhibit 5 shows all existing wells within a one-mile radius of this well.

4. Location of Existing and/or Proposed Facilities:

- A. EnerVest Operating LLC ("EnerVest") will use one of its two existing production facilities located on the surface of Section 7, one located on the Sharbro Federal #1 well pad, and the other at the Blue Quail Federal #3 well pad, as shown in Exhibit 6. The choice of production facility will depend on working ownership participation in the well.
- B. If the well is productive, contemplated facilities will be as follows:
- 1) Production will be sent to one of the two existing production facilities described in "A" above.
 - 2) Additions, if needed, to the existing tank battery and facilities including any piping will be installed according to API specifications.
 - 3) Any additional caliche will be obtained from a BLM-approved caliche pit or from a private source. Any additional construction materials will be purchased from contractors.
 - 4) If the production goes to the tank battery at the Sharbro Federal tank battery, 1,231 feet of flow line will be constructed to this well. If production from this well goes to the tank battery at the Blue Quail Federal #3 tank battery, 3,473 feet of flow line will be constructed to this well. All lines will be laid alongside the access road from the well to the appropriate tank battery. The proposed flow line route to the Blue Quail Federal #3 tank battery is highlighted in red on Exhibit 6. The proposed flow line route to the Sharbro Federal tank battery is highlighted in blue on Exhibit 6. The flow line will be constructed of a 4" SDRIL poly line which will be laid on the surface. Flow lines will be kept at least 3' apart.
 - 5) Electric service will be provided from a power line to be constructed along the existing north/south road and the new road to the location, as described above and shown on Exhibits 2 and 6.
 - 6) Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown on Exhibits 2 and 6. If a commercial fresh water source is nearby, temporary "fast line" may be laid alongside access roads existing at the



time the line is laid and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials:

All caliche required for construction of the drill pad and proposed new access road (approximately 2012 cubic yards) will be obtained from a BLM-approved caliche pit or from a private source.

7. Methods of Handling Waste:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in rolloff style mud boxes and taken to an NMOCD-approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD-approved commercial disposal facility.
- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.
- E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole, only a dry hole marker will remain.

8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

9. Well Site Layout:

- A. The drill pad layout, with elevations staked by John West Surveying Company, is shown in Exhibit 4. Dimensions of the pad, including the closed loop mud system, are shown on Exhibit 8. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level, no major cuts will be required.
- B. Exhibit 8 also shows the proposed orientation of the closed loop mud system, and access road. No permanent living facilities are planned; however, a temporary foreman/toolpusher trailer and crew quarters trailers will be on location during the drilling operations.



10. Plans for Restoration of the Surface:

A. General Provisions:

All interim and final reclamation operations shall be performed to BLM standards. Earthwork for interim and final reclamation will be completed, weather permitting, within 6 months of well completion or plugging unless a delay is approved in writing by the BLM authorized officer. The BLM will be notified at least 3 days prior to commencement of any reclamation operations. Re-seeding of reclaimed areas shall be performed to BLM standards.

B. Interim Reclamation:

All portions of the well pad not needed for daily production operations will be stripped of surfacing material before further reclamation begins. The portions of the cleared well site not needed for active operational and safety purposes will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible.

The well pad will be scraped of surfacing material such that the only portion of the pad remaining will be as shown in Exhibit 8A, with areas in excess of 15 feet outside the rig anchors (other than access road) being scraped.

The crushed rock or gravel removed during the scraping operation will be stockpiled and either saved for use on future roads or pads, or returned to the pit from which it was originally removed. Topsoil stockpiled during the construction of the pad will be returned to the reclaimed area.

Roads and, where applicable, well production equipment such as tanks, treaters, separators, vents, electrical boxes and equipment associated with pipeline operations will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment will be moved so proper recontouring and revegetation can occur.

C. Final Reclamation:

All surfacing material will be removed from the well pad and roads before further reclamation begins. All disturbed areas, including roads, pipelines, pads, production facilities and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Salvaged topsoil in the interim reclaimed areas will be re-spread evenly over the entire disturbed site to insure successful revegetation. If



CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or EnerVest Operating LLC am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 6 day of May, 2011.

Signed: Lee Thomas

Printed Name: Lee Thomas

Position: Drilling Manager

Address: 1001 Fannin, Suite 800, Houston, Texas 7700

Telephone: (713) 495-1502

Field Representative (if not above signatory): William Pilkington

E-mail: lthomas@enervest.net

Survey Sites:

Please see circled numbers 1-11 on the attached map.

<u>GPS Coordinates and Legal Description</u>	<u>Date</u>	<u>Time (MST)</u>	<u>Weather Conditions</u>
Site 1.--32°18.341'N, 103°41.698'W T23S R32E, Sec. 17, NE 1/4	27Mar00 12Apr00	0530-0535 0455-0500	high clouds, calm high thick overcast, nearly calm
Site 2.--32°17.922'N, 103°41.377'W T23S R32E, Sec. 16, SW 1/4	27Mar00 12Apr00	0538-0543 0503-0508	high clouds, calm high thick overcast, nearly calm
Site 3.--32°18.351'N, 103°42.539'W T23S R32E, Sec. 18, NE 1/4	27Mar00 12Apr00	0611-0616 0536-0541	clear, calm high thick overcast, nearly calm
Site 4.--32°18.768'N, 103°43.699'W T23S R31E, Sec. 12, SE 1/4	27Mar00 12Apr00	0620-0625 0546-0551	clear, calm high thick overcast, nearly calm
Site 5.--32°19.016'N, 103°43.482'W T23S R31E, Sec. 12, SE 1/4	27Mar00 12Apr00	0627-0632 0553-0558	clear, calm high thick overcast, nearly calm
Site 6.--32°19.692'N, 103°43.012'W T23S R32E, Sec. 6, SW 1/4	27Mar00 12Apr00	0638-0643 0604-0609	clear, calm high thick overcast, nearly calm
Site 7.--32°19.449'N, 103°42.452'W T23S R32E, Sec. 7, NE 1/4	27Mar00 12Apr00	0645-0650 0612-0617	clear, calm high thick overcast, nearly calm
Site 8.--32°18.816'N, 103°42.460'W T23S R32E, Sec. 7, SE 1/4	27Mar00 12Apr00	0652-0657 0619-0624	clear, calm high thick overcast, nearly calm
Site 9.--32°18.804'N, 103°42.705'W T23S R32E, Sec. 7, SE 1/4	27Mar00 12Apr00	0658-0703 0627-0632	clear, calm high thick overcast, nearly calm

Site 10.--32°19.472'N, 103°41.707'W T23S R32E, Sec. 5, SE 1/4	12Apr00	0640-0645	high thick overcast, nearly calm
	14Apr00	0515-0520	clear, wind 5-10SE
Site 11.--32°19.444'N, 103°41.440'W T23S R32E, Sec. 5, SE 1/4	12Apr00	0650-0655	high thick overcast, nearly calm
	14Apr00	0505-0510	clear, wind 5-10SE

Results:

Please see the attached map. No evidence of lesser prairie chickens was heard or observed within the 0.5-mile radius encircling each of the 11 survey sites.

Conclusions:

There are no breeding leks within at least 0.5 mile of Sharbro Federal #1 or Sharbro Federal #2, Lea Co., NM.



May 6, 2011

Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

Re: Designation of Agent

To Whom It May Concern:

Please be informed that James C. Hunnicutt and Gary Miller, both employed by Tetra Tech, Inc., are each authorized to prepare and execute Applications to Drill, Right of Way applications and other BLM-required forms on behalf of EnerVest Operating, Ltd.

The mailing address and office telephone number of these two agents are as follows: Tetra Tech, Inc., 1910 North Big Spring, Midland, Texas 79705, office number - (432) 682-4559. The email addresses and cell phone numbers for these two agents are as follows:

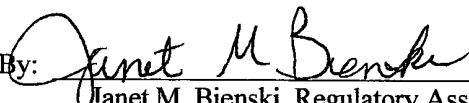
James C. Hunnicutt
Cell: (432) 557-4679
Email – james.hunnicutt@tetrattech.com

Gary Miller
Cell – (432) 557-4681
Email – gary.miller@tetrattech.com

Please feel free to call the undersigned if you have any questions about this matter.

Very truly yours,

EnerVest Operating, Ltd.

By: 
Janet M. Bienski, Regulatory Assistant

SHARBRO FEDERAL #10 EXHIBITS AND ATTACHMENTS

Attachment 1	Check for \$6,500.00 – BLM APD filing fee
Attachment 2	BLM Form 3160-3
Attachment 3	Designation of Agent
Exhibit 1	Plat Page (Form C-102)
Exhibit 2	Topographic Map
Exhibit 3	Vicinity Map and Area Roads
Exhibit 4	Elevation Plat
Exhibit 5	Ownership Map with Well Location and Wells in 1-mile Radius
Exhibit 6	Plan of Development (Roads, Flow Lines, Power Lines and Tank Battery)
Exhibit 7	Drilling Plan
Exhibit 8	Rig Layout
Exhibit 8A	Interim Reclamation Plat
Exhibit 9	BOP Diagram
Exhibit 9A	Choke Manifold Diagram
Exhibit 10	C-144 CLEZ, Closed Loop System Permit Application and Closed Loop Schematic (Original filed with NMOCD)
Exhibit 11	H2S Plan
Exhibit 12	Surface Use Plan of Operations and Operator Certification